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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,817	01/08/2004	Rhonda L. Childress	AUS920030939US1	6768
35525	7590	05/01/2007	EXAMINER	
IBM CORP (YA)			ANWARI, MACEEH	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/753,817	CHILDRESS ET AL.
	Examiner	Art Unit
	Maceeh Anwari	2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 08 January 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 January 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>10/24/05, 1/8/04</u>	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

This is the initial Office action based on the 10/753,817 application filed January 08, 2004. Claims 1-20, are originally filed, are currently pending and have been considered below.

### ***Specification***

1. The disclosure is objected to because of the following informalities: in the Cross Reference to related applications section the applicant leaves the serial number to the referenced application blank.

Appropriate correction is required.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show entry number 500 in figure 5 as described in page 14 of the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary

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to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10-20 are rejected under 35 U.S.C. 101 because The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "non-functional descriptive material." Both types of "descriptive material" are non-statutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive

material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming non-functional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because “[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.”).

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6 & 8-16 & 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson et al (hereinafter Nelson), U.S. Publication No.: 2003/0005092 A1.

Nelson teaches:

Claim 1:

A method in a data processing system for monitoring transactions for a set of known nodes in a network data processing system, the method comprising: receiving cache data from a router in the data processing

system, wherein the cache data includes an identification of the set of known nodes sending data packets for transactions onto the network data processing system (Par. 49-50; reads on this limitation with mention of the ARP Cache); and tracking the transactions for the set of nodes using the cache data from the router (Par. 18; reads on the limitation of the device being a router & Par. 49-50; reads on the limitation of tracking and within a set of nodes utilizing the cache data).

**Claim 2:**

The method of claim 1, wherein the cache data is from an address resolution protocol cache located on the router (Par. 49-50; reads on this limitation with mention of the ARP Cache).

**Claim 3:**

The method of claim 1 further comprising: receiving cache data from other routers on the network data processing system (Par. 49-50; reads on this limitation with mention of the ARP Cache from one or multiple nodes and devices within the network).

**Claim 4:**

The method of claim 1, wherein the receiving step occurs on a periodic basis and further comprising (Par. 52; reads on the limitation of

the process being periodic): identifying transactions handled by a node in the set of known nodes using the cache data received on the periodic basis from the router (Par. 8 & 52; reads on the limitation of identifying and a node in a set of known nodes and doing it on a periodic basis).

**Claim 5:**

The method of claim 1 further comprising: analyzing usage of each node in the set of known nodes using the cache data (Par. 49-50; reads on this limitation using a “table walk” discovery technique).

**Claim 6:**

The method of claim 5 further comprising: selectively initiating a load balancing process in response to analyzing the usage of each node in the set of known nodes (Par. 6 & 11 & 26; reads on this limitation through the “range walk” discovery technique).

**Claim 8:**

The method of claim 2, wherein the cache data is received through an agent located on the router (Par. 5 & 18 & 49-50; This is also an inherent feature within routers to have some sort of memory and an agent or a daemon).

Claim 9:

The method of claim 8, where the agent clears the address resolution protocol cache each time data is sent to the data processing system (This is an inherent feature among routers, where the ARP Cache entries will eventually time-out and a new query will have to be made).

Claim 10:

A data processing system for monitoring transactions for a set of known nodes in a network data processing system, the data processing system comprising: a bus system (Par. 18; reads on the limitation of a bus because it mentions any Internet-connected computer network); a communications unit connected to the bus system (Par. 9; reads on this limitation with the ARP table walk discovery techniques); a memory connected to the bus system, wherein the memory includes a set of instructions (Par. 49-50); and a processing unit connected to the bus system, in which the processing unit executes the set of instructions to receive cache data from a router in the data processing system, in which the cache data includes an identification of the set of known nodes sending data packets for transactions onto the network data processing system, and tracks the transactions for the set of nodes using the cache data from the router ( Par. 18; reads on the limitation of the device being a router & Par. 49-50; reads on this limitation because in order for the “table walk” technique to take place it would need a processing unit and an

executable set of instructions for the recursive process—so that it could track and identify).

Claim 11:

A data processing system for monitoring transactions for a set of known nodes in a network data processing system, the data processing system comprising: receiving means for receiving cache data from a router in the data processing system, wherein the cache data includes an identification of the set of known nodes sending data packets for transactions onto the network data processing system (Par. 49-50; reads on this limitation with mention of the ARP Cache and identifying the set of known nodes); and tracking means for tracking the transactions for the set of nodes using the cache data from the router (Par. 18; reads on the limitation of the device being a router & Par. 49-50; reads on the limitation of tracking and within a set of nodes utilizing the cache data).

Claim 12:

The data processing system of claim 11, wherein the cache data is from an address resolution protocol cache located on the router (Par. 49-50; reads on this limitation with mention of the ARP Cache).

Claim 13:

The data processing system of claim 11 wherein the receiving means is a first receiving means and further comprising: second receiving means for receiving cache data from other routers on the network data processing system (Par. 49-50; reads on this limitation with mention of the ARP Cache from one or multiple nodes and devices within the network).

Claim 14:

The data processing system of claim 11, wherein the receiving means is initiated on a periodic basis and further comprising (Par. 52; reads on the limitation of the process being periodic): identifying means for identifying transactions handled by a node in the set of known nodes using the cache data received on the periodic basis from the router (Par. 8 & 52; reads on the limitation of identifying and a node in a set of known nodes and doing it on a periodic basis).

Claim 15:

The data processing system of claim 11 further comprising: analyzing means for analyzing usage of each node in the set of known nodes using the cache data (Par. 49-50; reads on this limitation using a "table walk" discovery technique).

Claim 16:

The data processing system of claim 15 further comprising:  
initiating means for selectively initiating a load balancing process in  
response to analyzing the usage of each node in the set of known nodes  
(Par. 6 & 11 & 26; reads on this limitation through the "range walk"  
discovery technique).

Claim 18:

A computer program product in a computer readable medium for  
monitoring transactions for a set of known nodes in a network data  
processing system, the computer program product comprising: first  
instructions for receiving cache data from a router in the data processing  
system, wherein the cache data includes an identification of the set of  
known nodes sending data packets for transactions onto the network data  
processing system (Par. 49-50; reads on the limitation of cache data and  
identifying a set of known nodes); and second instructions for tracking the  
transactions for the set of nodes using the cache data from the router  
(Par. 49-50; reads on the limitation of tracking using the cache data).

Claim 19:

The computer program product of claim 18, wherein the cache data  
is from an address resolution protocol cache located on the router (Par.  
49-50).

## Claim 20:

The computer program product of claim 18 further comprising: third instructions for receiving cache data from other routers on the network data processing system (Par. 49-50; reads on this limitation with mention of the ARP Cache from one or multiple nodes and devices within the network).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 7 & 17 are rejected under 35 U.S.C. 103(a) as being obvious over Nelson et al. U.S. Publication No.: 2003/0005092 A1 in view of Nelson et al. Patent No.: 5,835,720.

Nelson discloses, in U.S. Publication No.: 2003/0005092 A1, the elements of claims 1-6 & 8-16 & 18-20, namely the receiving the cache data, tracking transactions for a set of nodes, the ARP, where the receiving the cache data at periodic intervals, analyzing the usage of each node, and selectively load balancing.

Nelson discloses, in U.S. Publication No.: 2003/0005092 A1, does not appear to explicitly disclose generating a display of the set of known nodes in a graphical view, wherein the graphical view includes the communications paths with a graphical indication of the network traffic.

However, Nelson et al (in Patent No.: 5,835,720) discloses a graphical user interface (GUI), a network topology database and a Discover program. Running the Discover program, the network manager seeks out the IP and SNMP-addressable devices on the network, and adds instances of discovered devices to the network topology database.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Nelson et al. (Pub. No.: 2003/0005092 A1) and Nelson et al. (Pat. No.: 5,835,720) before him or her to modify the “table walk” technique of Nelson et al. (Pub. No.: 2003/0005092 A1) to include a graphical display of the network topology and a graphical indication of the network traffic because it would portray the recursive process, of the “table walk” technique, more thoroughly.

The suggestion for doing so would have been where Nelson et al. (Pub. No.: 2003/0005092 A1) mentions (Par. 50, lines 14-15) that any of the discovery techniques he discussed could be used in conjunction with other discovery techniques.

Therefore, it would have been obvious to combine Nelson et al. (Pub. No: 2003/0005092 A1) with Nelson et. Al. (Pat. No.: 5,835,720) to obtain the invention as specified in the instant claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maceeh Anwari whose telephone number is 571-272-7591. The examiner can normally be reached on Monday-Friday 7:30-5:00 PM ES.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Del Sole can be reached on 571-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

M.A



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